CHAPTER 5: CONSULTATION AND COORDINATION

5.1 CONSULTATION

During preparation of the draft EIS and following publication of the draft, BLM consulted informally with several federal and state agencies (Forest Service, California Water Resources Control Board, Nevada Division of the Environment, Environmental Protection Agency, etc.).

There was no formal consultation with the U.S. Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act. The direction to establish standards and guidelines was previously analyzed in the Range Reform '94 EIS. However, BLM met with FWS and NMFS staff, and both agencies reviewed the Draft EIS. Both agencies provided letters concurring with BLM's conclusion that the measures proposed in the draft document (under all alternatives) would not adversely affect any listed species or any species proposed for listing. Implementation actions will be evaluated to determine if they may affect federally listed threatened or endangered (T&E) species, species proposed for listing, or designated or proposed T&E critical habitats. Before implementing actions that may affect listed or proposed species, the BLM will consult with the Fish and Wildlife Service or the National Marine Fisheries Service as required by Section 7 of the Endangered Species Act. In their letters to BLM, both agencies agreed that this would be appropriate (these letters are attached as Appendix B).

There has also been no discussion with the California Department of Fish and Game or the Nevada Division of Wildlife at the State level about state listed plant or animal species. Implementation actions would be evaluated to determine if they may affect state listed threatened or endangered (T&E) species, species proposed for listing, or designated or proposed T&E critical habitats. Before implementing actions that may affect state listed or proposed species, the BLM will consult with the States.

Before authorizing surface disturbance undertakings at the local level, BLM will identify cultural properties eligible for inclusion in the National Register of Historic Places and consider the effects of the proposed undertakings through the consultation process per Section 106 of the National Historic Preservation Act of 1966.

5.2 PUBLIC PARTICIPATION

The EIS public participation process consists of several phases. We worked with the Resource Advisory Councils (RACs), and we had public scoping to help identify issues and gather information. The draft EIS was subject to further public review and comment during the public comment period. Following the public comment period, this final EIS was developed. This final EIS takes into consideration the comments received during the review period.

Including public involvement throughout the process ensures that the process is open and considers information from all interested parties, including other federal agencies, state and local government, the scientific community, professional organizations, a variety of public land users, conservation organizations, and citizens at large.

5.2.1 Resource Advisory Councils

As BLM was directed to develop the standards and guidelines in consultation with the Resource Advisory Councils (RACs), we first worked to establish the RACs from members of the public as directed in the regulations in 43 CFR 1784. See Map 2 for the area covered by each RAC. Following development of the RACs, BLM resource specialists provided training on basic ecological processes. The RACs then worked with their constituents and with BLM staff to develop standards and guidelines for the areas they represent. Following public scoping, the RACs incorporated some of that public comment into revisions. These standards and guidelines are alternative 1 in this EIS.

Some RAC members also worked with BLM staff to prepare the state-wide standards in alternative 2.

Following the comment period on the draft EIS, the RAC members were sent copies of all of the comment letters. The RACs discussed the comments and the draft EIS in their meetings. Representatives of the three RACs then met with BLM staff in a workshop setting and made recommendations for modification of their original proposals. The original Alternative 1 as modified by these RAC recommendations, along with some changes made by BLM, is the new proposed alternative, Alternative 5.

5.2.2 Scoping

A Notice of Intent was published in the Federal Register on March 25, 1996, announcing the intent to prepare an environmental impact statement for the development of rangeland standards and guidelines in California and northwestern Nevada. This notice also asked for comments concerning the scope of the EIS and Plan Amendments. We received only 2 letters, one merely requesting to be placed on the mailing list.

BLM held three open workshops. Members of the public, members of the RACs, and some personnel from other agencies attended. Following the meeting on June 25, 1996, BLM sent out a state-wide news release and mailed over 1000 letters to potentially interested parties informing them of the EIS process and stating that we would accept public comments at any time. We then received 4 letters requesting that we open another public scoping period.

Due to this newly expressed interest, we opened a second formal scoping period for 30 days during August (although we continued to accept letters well into September). We again sent out a state-wide news release, and mailed out new letters to the previous recipients. From this we received approximately 2 dozen scoping/comment letters. These letters are on file in the California BLM State Office.

Based upon scoping comments that we needed to have an alternative that addressed a rapid recovery or rapid improvement concept, we approached three groups (California Native Plant Society, Natural Resources Defence Council, and Range Watch) for their input. The Native Plant Society (CNPS) provided us with a complete alternative. We used some of their concepts and information to prepare the rapid improvement alternative (Alternative 4).

5.2.3 Distribution of the Draft EIS

The impacts of the first four (4) alternatives were analyzed in the draft EIS, which was released for public review and comment during a 90-day comment period in mid-1997. Copies of the draft EIS were sent to federal agencies, state and local governments, livestock operators and companies, environmental organizations, and many people concerned about the development of standards and guidelines for rangeland health. A copy of the draft EIS was sent to each person who requested it. The draft EIS and the written comments received were also available to the public on a WEB site, and some of the comments were received electronically.

During the public comment period, BLM also met with agencies, interest groups, county supervisors, permittees and others to answer questions about the alternatives, the analysis, and the potential implementation. Groups and agencies that were briefed included: California Cattlemen's Association, CA Farm Bureau Federation, Forest Service (Region 1), US Fish and Wildlife Service, CA State Water Resources Control Board, Environmental Protection Agency (Regional Office), NV Division of Environment, CA Range Management Advisory Committee (CDFFP), CA Native Plant Society, Natural Resources Defence Council, Cal Trout, CA Wilderness Coalition, Owens Valley Indian Water Commission, CA Department of Fish and Game (Bishop), CA Farm Advisor (Inyo/Mono Co), and the three RACs.

5.2.4 Final EIS

This final EIS incorporates comments and changes resulting from the public comment period, from review of newly obtained information, and from additional research and analysis done by BLM in response to those comments and that information. Copies of this final EIS have been sent to federal agencies, state and local governments, livestock operators and companies, environmental organizations, and others who have expressed an interest in the development of standards and guidelines for rangeland health. A copy has been sent to each person who requested it.

A copy of all comment letters appears in the Appendix to this chapter, while responses to the comments within those letters is part of this chapter, beginning with Section 5.4.

5.2.5 Additional Actions

No sooner than 30 days after publication of the final EIS, the California State Director for BLM will issue a record of decision selecting standards and guidelines for California and northwestern Nevada. These standards and guidelines will then be sent to the Secretary of the Interior for final approval.

5.3 LIST OF PREPARERS

The following people, agencies and organizations participated with, and/or provided input to, BLM in developing the standards and guidelines in the various alternatives.

5.3.1 Bakersfield RAC

Tobin, Ed	Off-road vehicle use
Center, Bill	Commercial recreation
Arita, Steven	Energy / minerals
Twisselman, Carl	Federal grazing
Anderson, Linda	Historical / archeological
Timmer, Kerri	Resource conservation
Scott Hennessy	National / regional environmental
Cypher, Ellen	National / regional environmental
Maze, Bill	Elected officials
Saulque, Joseph	Native American interests
Alpers, Tim	Public at large
Pachucki, Walt	Public at large

5.3.2 Ukiah RAC

Cooksley, James	Energy / minerals
Furman, Duane	Federal grazing
Lassiter, Patric	Off-road vehicle use
Engstrom, Thomas	Commercial timber
Evans, Steve	National / regional environmental
Henson, Ryan	National / regional environmental
Katelman, Tracy	National / regional environmental
Reginato, John	Dispersed recreation
Bundy, Burton	Public at large
Bungarz, Denton	Elected officials
Sargent, Richard	Native American interests
Weaver, Dan	Public at large

5.3.3 Susanville RAC

Hansen, Jack	Federal grazing
McGarva, Ken	Federal grazing
Coops, Don	Federal grazing
Kerns, Steven	Federal grazing
Parshley, Jeff	Mining interests
Beaman, Kay	Historical interests

Berrier, George	Wild Horse and Burro interests
Garrod, Tim	National / regional environmental
Heniz, Dan	National / regional environmental
Morphis, Huel	Dispersed recreation
Bixby, William	Local / state government
Dick, Gordon	Public at large
Forrest, Erin	Native American interests
Huffman, Nancy	Elected officials
Jansen, Henricus	Academia

5.3.4 Public Interest Groups, Agencies

California Cattlemen's Association
California Farm Bureau Federation
California Native Plant Society
California State Water Resources Control Board and Regional Water Quality Control Boards
Natural Resources Defense Council
Nevada Division of the Environment
U.S. Forest Service
U.S. Environmental Protection Agency

5.3.5 BLM Preparers

The following BLM staff contributed by working with the RACs, providing resource information, doing analytical work, and writing the EIS.

Anthony-Wheeler, Jennifer	Natural Resource Specialist, Arcata R.A.
Bardwell, Pardee	Range Conservationist, Clear Lake R.A.
Borchard, Steve	Soil Scientist, Redding R.A.
Bosworth, John	Environmental Coordinator, Eagle Lake R.A.
Brink, Paul	Wilderness Coordinator, California State Office
Cooney, Frank	Outdoor Recreation Planner, Surprise R.A.
Cotterill, Bruce	Range Conservationist, Hollister R.A.
Cranston, Peggy	Wildlife Biologist, Folsom R.A.
Decker, James	Riparian Coordinator, California State Office
Delaney, Leroy	Field Manager, Ridgecrest R.A.
Devalois, Tara	Range Conservationist
Dodge, Douglas	Supervisory Resource Management Specialist, Bishop R.A.
Doran, Karen	Natural Resource Specialist (Range), Caliente R.A.
Farschon, Roger	Wildlife Biologist, Surprise R.A.
Fontana, Jeff	Public Affairs Specialist, NorCal Support Team
Gish, Mark	Range Conservationist, Bishop R.A.
Hansen, Linda	Field Manager, Eagle Lake R.A.
Halford, Anne	Botanist, Bishop R.A.
Knox, Anne	Coop. Educ. Trainee, Botany, California State Office

Lorentzen, Ed	T&E Species Coordinator, California State Office
Mauck, Ralph	Range Conservationist, Eagle Lake R.A.
Mercer, Larry	Public Affairs Specialist, Bakersfield District Office
Mills, John (Jack)	Environmental Coordinator, California State Office
Molter, Joseph	Natural Resource Specialist, Redding R.A.
Morrison, James	Rangeland Management Specialist, California State Office
Saslaw, Lawrence	Wildlife Biologist, Bakersfield District Office
Stokke, Susie	Field Manager, Surprise R.A.
Visser, Kenneth M.	Lead Range Conservationist, Eagle Lake R.A.
Wagner, Joseph A.	Range Conservationist, Alturas R.A.
Willoughby, John	State Botanist, California State Office
Wingate, George	Watershed Management Specialist, Eagle Lake R.A.

Maps were prepared by the California State Office, GIS Staff, Donna Smith, coordinating.

5.4 RESPONSE TO COMMENTS

The BLM received 47 comment letters from a variety of individuals, organizations and agencies. Comments have been addressed if they relate to inadequacies or inaccuracies in the analysis or methodologies used; identify new impacts, recommend reasonable alternatives or mitigation measures; or involve substantive disagreements or interpretations of significance. The comments generally fell within the following categories: NEPA Process, Riparian Health, Vegetation, Grazing, Monitoring and Implementation, Threatened and Endangered Species, Economic and Social Impacts, Wildlife, Water Quality, Other Resource or User Impacts, and Standards and Guidelines.

Letters were submitted by mail, e-mail, faxed or hand-delivered, and included typed and hand-written text. The full text of these letters, along with a list of commentors, is in Appendix A attached to this volume. Most of the letters are direct reproductions of the letters we received; however, a couple of the letters were re-typed by BLM due to the poor quality of our reproduction.

Each letter has been assigned a number, in order of its receipt (the list is at the beginning of Appendix A). BLM has gone through each letter and identified those portions of the letters that made a statement or suggestions, or requested a response. These comments were then numbered consecutively.

There were a number of comments that addressed larger topics that BLM felt should be addressed in-depth, as well as comments from different individuals or groups that addressed the same topics. Responses to these comments are in the following section, 5.4.1.

The individual comments are addressed in Section 5.4.2.

5.4.1 General Responses to Comments

There were a number of comments that addressed larger topics that BLM felt should be answered in-depth, as well as comments from different individuals or groups that addressed the same topics and are more easily answered in a single explanation. The topics covered in this section include the NEPA Process, Utilization and Residue Levels, Implementation and Monitoring, Soils, Impacts from other Programs and Uses, Recreation, Wilderness

Process

Comment: Several comments stated that the DEIS is inadequate and should be supplemented or reissued for various reasons, including that BLM failed to adequately address a proper range of alternatives, failed to address the proper "no action" alternative, provided insufficient data (and has data gaps) for the public to make adequate analysis, and failed to address cumulative impacts.

Response: BLM will not reissue the DEIS, for the reasons explained below.

1. **Failure to address the correct "no action" alternative.** Commentors requested that BLM address what were current grazing practices, because they felt that those actually comprise the no action alternative.

The new grazing regulations require certain actions be taken, including implementation of the fallback standards and guidelines by a certain date, if a state has not developed its own standards and guidelines. As required by the regulations, the "fallback" standards and guidelines are currently being implemented (see Appendix 21 for the implementation plan). There is no option of not implementing those standards and guidelines pending the development of other standards and guidelines. Therefore, the "fallback" standards and guidelines are the "no action" alternative.

However, what was the current situation is indeed addressed. The descriptions in Chapter 3 -- The Affected Environment are the existing situation that developed under what was current grazing administration prior to the implementation of the fallback standards and guidelines. These descriptions are of the "no action" alternative requested by the commentors, although there is no specific analysis of what would transpire if this system were left in place. Although it might have had some value for comparison, this analysis was omitted from Chapter 4 because it is not a valid alternative under the regulations and BLM does not have the discretion to choose it as an option. The national EIS for Rangeland Reform 94, which included an analysis for possible Bureau-wide standards and guidelines, including the fallbacks, addressed what was the current situation as a no action alternative.

2. **The range of alternatives was inadequate.** BLM should analyze the draft alternative provided by the California Native Plant Society (CNPS), alternatives provided by the CA State Water Resources Control Board (SWRCB), and others.

The proposal provided by CNPS was reviewed by the EIS team. There were several valid, worthwhile suggestions in that alternative that were incorporated within Alternative 4 in the DEIS. However, there were several features of the CNPS

alternative that were dropped because they were arbitrary and could not be implemented under the regulations or were so narrow and restrictive that they could not physically be met even in areas that are healthy, properly functioning ecosystems.

The prime example of these types of suggestions was for the automatic reduction of grazing by 20% in any area not meeting a standard, to be followed by another 20% reduction each year that an area continues to not meet the standard. This action could not be implemented or supported according to the regulations. A second example was the suggested standard that only 5% of any area could be bare ground. This standard would be difficult to meet in a well functioning riparian area. Most upland areas in the Great Basin, even properly functioning grasslands, may have more than 5% bare ground.

Suggestions from other organizations and agencies such as SWRCB have been considered and are included in the final EIS where appropriate.

3. **The level of analysis was too general.** Several commentors stated that the level of analysis was too general, with a request that BLM provide data for each and every allotment, and provide analysis at the allotment level. They also requested specific allotment by allotment schedules for implementation, information on specific allotment problems, what will be done on each allotment, and when it will be done.

The intent of the EIS, as stated in Chapter 1, is to develop Standards and Guidelines for grazing management for the entire region managed by California BLM. For that purpose, a general state-wide analysis is necessary. The summary projections provided are sufficient to make a judgement of whether an alternative would meet the goal of providing adequate standards and guidelines.

Since the DEIS was issued, the resource areas have prioritized their known problem areas and responded with an implementation schedule of which allotments need management attention prior to the next grazing season, and what assessments are planned during the next couple of years, based upon their current funding levels and their priorities. This information is provided in Appendix 21, and should satisfy many of the questions directed at the lack of data or lack of specific implementation plans within the DEIS. There is also a discussion on monitoring in Appendix 22 that may prove helpful.

Most people understand the general nature of this document and the fact that a general environmental analysis is needed. However, BLM wishes to reaffirm to the public our commitment that as the Resource Area staffs develop and implement specific changes on specific allotments, we will comply with the NEPA process, and involve interested parties, as well as the grazing permittees, in the decision-making process.

4. **BLM failed to address cumulative impacts.** There were a couple of comments that BLM failed to meet the NEPA requirement for addressing cumulative impacts.

BLM did not address cumulative impacts in all areas, and did not have a separate cumulative impacts analysis section. The EPA also pointed this out to us. Following

their recommendation, the cumulative impacts analysis has been included in a separate section of Chapter 4 of the final EIS.

Utilization and Residue Levels

Comment: Following publication of the draft EIS, there were numerous comments made about whether utilization and residue (stubble height) guidelines should be used to help achieve rangeland health in sagebrush steppe areas.

Response: Due to the nature of the comments, BLM did an extensive literature review and analysis of this topic. Appendix 20 contains a detailed discussion of the basic issues that were raised during the comment period, and the validity of using utilization and residue as measures to help achieve rangeland health.

The lessons from the studies that were reviewed are that stocking rate and utilization are more important than grazing systems in improving rangelands and that attention must be given to maintaining conservative stocking rates and utilization levels at all times during the year. One or even two years' rest cannot be expected to make up for heavy use during even a single year.

Based on the review of existing information it is clear that it is not only possible but desirable to set Statewide guidelines on proper utilization and residue (stubble height) levels for the two major vegetation types, sagebrush-steppe and riparian vegetation. These guidelines will be used unless and until they are modified by site-specific (e.g., allotment or group of allotments) guidelines. The guidelines (incorporated into Alternative 5) will be the same as those recommended under Alternative 4, for both the utilization levels for uplands and the stubble height requirements for riparian area. The scientific literature supporting these levels seems clear. (An annotated bibliography covering this topic follows the reference section in Volume 1 of this Final EIS.)

Implementation and Monitoring

Soils

Comment: Comments were made requesting that specific numerical standards be developed and used for soils -- specifically suggest some appropriate standards of these indicators (of rangeland health) [reference to "Rangeland Health Evaluation Matrix" (National Research Council, 1994), Appendix 1, pages 1-2, in this EIS].
Indicator: surface aggregate stability, standard: similar to ungrazed site
Indicator: % cover by bare soil, standard:< 5% bare soil.
Indicator: rooting depth, standard depth to "common" root abundance.
Indicator: soil compaction, standard: bulk density +/- 5% variation from ungrazed site.
Indicator: streambank trampling, standard: equivalent between grazed and ungrazed sites.

Response: The National Research Council proposed the indicators of rangeland health that involve simple and mostly visual estimates. Limited field tests were carried out to evaluate utility. They found that placing the boundaries between healthy, at risk,

and unhealthy rangelands is not clear and requires judgement. Indicators are used to build "a preponderance of evidence" rather than establish absolute numerical thresholds.

An interagency workgroup is working on an assessment procedure for rangeland health that relies on qualitative measurements or judgements. A draft of this procedure is included as Appendix 25 of the FEIS. To characterize the health status of a selected landscape, indicators are used to assess the condition of selected plant and physical environment attributes. An indicator is a component of a system whose characteristics (presence or absence, quantity, distribution) are used as an index of those attributes that are too difficult, inconvenient, or expensive to measure. Soil stability and proper watershed function are important because they promote normal capture, storage and release of water. The assessment procedure includes four categories: 1) Cover by vegetation lifeform and ground cover; 2) Species abundance relative to dominant plant cover; 3) Physical environment status based on 10 indicators; and 4) Biotic environment status based on 8 indicators.

Physical environment indicators of soil and watershed condition are: flow patterns, surface litter, soil movement by water or wind, soil crusting and surface sealing, compaction layer, rills, gullies, cover amount, and cover distribution.

Bare soil is evaluated during the evaluation of litter distribution and incorporation. To request the standard be < 5% across the landscape and without regard for variation between natural healthy ecosites, demonstrates a lack of understanding of the variety of conditions on rangelands in California. Many sites in excellent condition have >5% bare soil even if ungrazed.

The proposal for a standard which seeks parity of grazed and ungrazed depth to a "common" (10-100 very fine or fine roots/decimeter^2) root density is a reasonable standard. However, a similar standard which accomplishes the same goal might read "parity in root abundance and depth between grazed and ungrazed sites." An inference could be made, based upon the appearance of similar above ground foliage distribution and abundance, that parity of root distribution exists.

Soil compaction as measured by comparing bulk density can be inferred by other indicators such as evidence of excessive runoff, plant distribution differences, or root distribution.

We disagree with stream bank trampling standards. PFC provides a methodology for assessing the physical function of riparian and wetland areas. The preferred alternative contains riparian guidelines which require "root masses sufficient to stabilize stream banks," "80% vegetative cover," "adequate stream bank stability," "sufficient herbaceous forage biomass to meet the requirement....bank protection...," and "Stream bank vegetation is vigorous and diverse, mostly perennial, and holds and protects banks...." We feel that these guidelines adequately protect streambanks.

Impacts from other Programs and Uses

Comment: Wild horses and burros, recreational uses, mining and other programs all have an impact upon rangeland health. Many commentors requested that we analyze those impacts. Others stated that those activities on public lands should be held to the same standards of rangeland health as the grazing program.

> **Response:** The commentors are quite accurate in their assessments that other BLM programs affect the environment as much or more so than grazing. This fact was consistently mentioned in the DEIS, without going into great detail, and the issue is being discussed by BLM at the national level. However, the purpose of this EIS is to establish standards and guidelines for grazing management, not to analyze the entire spectrum of BLM programs.

Recreation

1. **Comment:** Some commentors questioned the high economic value of recreation to local economies because of a belief that recreational users do not pay fees, and make most of their expenditures in their own towns, not in the rural communities near BLM lands. Others raised a concern that recreation actually increases local costs due to crime and increased law enforcement needs. Another requested the source for the value of $400-500 million given to recreation expenditures in the DEIS.

> **Response:** Some recreational users pay fees, some don't. The casual visitor, whether on OHV, mountain bike, or foot does not directly pay a fee for recreating on most public lands managed by BLM. However, operators of businesses who profit from recreation on public lands pay a fee for their permits (examples are pack trips, OHV events, races, etc.), and also obtain insurance to indemnify the BLM. The fees paid to BLM vary depending upon the size of the event, the duration, and the profit.
>
> Assuredly, big ticket items such as motor homes, OHVs, and trailers, as well as many other items such as fishing rods, tents, and even groceries are primarily purchased near one's residence. However, a tremendous amount of money is spent in small rural towns near BLM lands. As an example, the economy of Bishop, CA (Inyo County) is largely dependent upon tourism and recreation use. Local expenditures include motels, restaurants, groceries, fishing guides, tackle, boat rentals, gasoline, etc. In a report for the State of California Tourism Department and the Department of Parks and Recreation (Runyan 1994), Dean Runyan Associates states that the **average** rural camper spends $62.84 per day in the rural location of his or her vacation.
>
> There are no doubts that along with increased recreational use and tourism, there may be some increased costs for search and rescue, law enforcement, etc. Search and rescue costs, though, are commonly billed to the home county of the individual involved.
>
> The value to the local economy of recreational use on public lands given as $400-500 million was an error. This has been changed in the text. The correct figure of $200 million is an estimate derived from several economic studies of recreation and tourism within the state by the State of California and the Outdoor Recreation Coalition of America (see Calif. Dept of Parks and Recreation 1994; ORCA & SMGA 1995 and 1997; and Runyan 1994). Within the context of California's economy, travel and

tourism are growing at a rate that by the year 2000, California's tourism will be the largest

industry in the world (reported by John Poimiroo, Deputy Secretary of the California Trade and Commerce Agency in a memorandum to the California Park and Recreation Leadership Institute in December 1997).

2. **Comment:** A couple commentors suggested that we should discuss how recreational opportunities would be affected by the alternatives.

Response: The DEIS stated that recreational opportunities would improve with improved health of the ecosystem. Specific opportunities were not addressed due to the general (non site-specific) nature of the EIS.

As an example, if the proper functioning condition of a stream improves, the aquatic species habitat generally improves too. However, the site specific decision (made in a Resource Management Plan or through some other planning document) to manage for a certain species would dictate what type of vegetative community and structure would be desired. Management for a recreational fishery with a more open vegetative community providing fishing access would increase that recreational opportunity. However, managing for an endangered species of snail darter (removing exotic salmonids and allowing dense vegetative cover to develop) would not provide the same recreational opportunity. However, the change in habitat might benefit certain types of birds, and thereby provide an increased opportunity for bird watchers.

3. **Comment:** One commentor suggested that BLM should consider the negative impacts to wildlife and hunters of developing the S&Gs and improving rangeland health. There was concern that BLM only discusses the advantages to be obtained by the livestock industry.

Response: There are no known detrimental impacts to wildlife (general) or recreationists from improving the health of the ecosystem by better managing livestock use. In general, a proper functioning ecosystem will better support wildlife, and thereby support hunters and other recreationists. There may be some adverse impacts in specific areas due to the management goals for that area (see example in #3 above), but these are not due to better managing grazing.

Wilderness

Comment: Several comments asked if provisions of the Wilderness Act or IMP policy take precedence over grazing in Wilderness or Wilderness Study Areas (WSAs) that are being adversely impacted by grazing (can or will BLM construct range improvements, etc., in these areas in violation of the Wilderness Act and IMP policies?).

Response: The Wilderness Act or other enabling legislation for wilderness areas and the Interim Management Policy (IMP) for wilderness study areas guides our management of those areas. Decisions to construct facilities to improve rangeland health, and thereby allow continued grazing, in designated wilderness and wilderness study areas are, and will be, made on a case-by-case basis following a complete multi-disciplinary environmental review under NEPA.

For WSAs, the guidance is clearly spelled out in the BLM Handbook 8550-1, the Interim Management Policy for Lands Under Wilderness Review. The law provides for,

and BLM policy is to allow, continuation of grazing uses on lands under wilderness review in the manner and degree in which these uses were being conducted on October 21, 1976 (the date of the passage of FLPMA), as long as they do not cause unnecessary or undue degradation of the lands. This is a "grandfathered" use under FLPMA.

Specific criteria to be used in making a decision are described in the handbook starting on page 10, under the heading of (6) Enhancing Wilderness Values, starting on page 19, under the heading of (B) Procedures for Evaluation of Proposed Actions, and starting on page 40, under the heading of (D) Rangeland Management.

For Wilderness Areas, Congress made specific exemptions within the Wilderness Act, and in several subsequent enabling Acts, to allow continued grazing (as explained in Chapter 3, page 58 of the DEIS). Grazing in BLM wilderness is managed under 43 CFR 4100 and 43 CFR 8560. The BLM manual 8560, entitled "Management of Designated Wilderness Areas," provides additional guidance.

The bottom line is that BLM can and might construct facilities that would enhance rangeland health and allow continued livestock grazing in wilderness areas or WSAs. These decisions would be made on a case-by-case basis, and would not be in violation of the Wilderness Act or the IMP.

5.4.2 Responses to Individual Comments

The individual comments are addressed in this section. Each of those comments is identified by a number, such as 1-3, or 16-24. The first number identifies the letter, and the second number is the comment BLM identified within the letter (e.g., 1-3 is the third comment from the California Cattlemen's Association, who submitted the first response letter; and 16-24 is the twenty-fourth comment from the NRDC and CNPS, who submitted the sixteenth response letter).

The full text of these letters, along with a list of commentors, is in Appendix A attached to this volume.

Comment Letter 1 -- California Cattlemen's Association

Comment 1-1: True. See general responses section 5.4.1, under Process.

Comment 1-2: Allotments that are meeting standards, or where the problem is not grazing related, fall into Categories 2 & 4 (see Chapter 2 and Appendix 21). In most cases, grazing management would not be changed in those areas to meet rangeland health standards.

Comment 1-3: There will be no arbitrary removal of livestock. However, if livestock removal (or reduction) is the best way to solve a problem, then that may occur. Such decisions will be made in consultation with affected permittees and concerned parties.

Comment 1-4: BLM will continue to be challenged, as it has in the past, to determine rangeland health conditions and how to improve those conditions. Decisions will be made in

consultation with affected permittees and concerned parties. The implementation schedule (Appendix 21) briefly outlines initial planned strategies based upon current knowledge. We expect that there will be some changes made as on-the-ground conditions are more closely examined by BLM staff, permittees, and interested parties. In any case, a documented evaluation should be made for each allotment verifying what the conditions are. In instances where collaborative determinations cannot be made because of disagreement, any interested or affected party may legally challenge the decision through the appeals process. While it is BLM's goal to use the "best science" available to make determinations and management prescriptions, it is also the responsibility of all those affected to help identify what the "best science" is for the specific situation.

The regulations do not allow delaying management changes until permits or leases are renewed as you suggest. BLM is required to determine the initial management changes needed prior to the start of the next grazing period regardless of the availability of adequate personnel and financial resources. (One reason we did not select Alternative 4 is that it could not be implemented with current budget and personnel restrictions.) Modified terms and conditions, where needed, and as determined from these initial evaluations, will be reflected as modifications to existing permits or leases. When permits or leases are considered for renewal or transfer, a close review and evaluation of the condition of the allotment would again be needed to determine what terms and conditions would be most appropriate for the new permit or lease. This will often require a formal allotment evaluation, with the appropriate NEPA analysis. The magnitude of the evaluations and processes will depend upon the anticipated specific resource management changes needed and the interest of the affected parties.

Comment 1-5: BLM Manual 6840 provides guidance for State Directors to designate sensitive species. These species include those that could easily become endangered or extinct within a state. In California, a list has been designated through nominations from each field office to the State Director. The species on this list are typically those that are not yet designated by the US Fish and Wildlife Service (FWS) and/or CA Fish and Game Commission, but for which BLM has determined that special management is necessary to reduce or eliminate threats that might require FWS or the State to list the species in the future.

Comment 1-6: A standard is by definition a set goal or condition to be achieved. A trend toward meeting the standard, although desirable, is not the standard itself. The regulations specifically provide that BLM determine where significant progress is being made toward meeting the fundamentals of rangeland health. The implementation strategies fully recognize this direction, and it is used as a criteria for determining priorities (Appendix 21).

Comment 1-7: A healthy, properly functioning ecosystem is one which is "active and maintains its organization and autonomy over time and is resilient to stress" (Haskell et al. 1993). This requires that the system maintain an "integrity of nutrient cycles, energy flows, plant community dynamics, and intact soil profile, and stores of nutrients and water" (National Research Council 1994).

If there is a problem with an allotment meeting the standards due to grazing (whether season long or otherwise), then grazing management will be adjusted to correct the problem. The RACs chose not to change this wording.

Comment 1-8: The RAC did not recommend changing this. The assumed intent is that periods of rest during critical plant growth would be applicable to all rangelands where and when needed to achieve proper functioning conditions, recovery of vegetation or desired plant community, irrespective if the cause was an episodic event or not.

Comment 1-9: We believe utilization and stubble height guidelines are an effective tool for meeting standards and that these can be set on a regional basis. Field managers are free to change these regional guidelines as appropriate for site-specific management. See the expanded discussion of utilization in Chapter 3, Section 3.2.5, and the annotated bibliography on utilization, as well as responses to comments 4-4 and 11-1. We also believe that the degree of streambank trampling is an effective monitoring tool to be used in meeting the standards.

Comment 1-10: The BLM intends to evaluate the diversity and abundance of insects and amphibians as indicators of healthy ecological processes. We recognize that environmental factors of habitat capability, population characteristics, regional/global influences, local demographics, etc., must be considered when assessing rangeland health. BLM must consider the cause-and-effect relationships between grazing (or other management) and insect and amphibian populations when applying this riparian health standard.

Comment 1-11: This would apply to any newly proposed facility. However, application to existing facilities would depend upon whether there was a problem caused by the existing location. This concept is also identified and supported in the set of proposed Best Management Practices (BMPs) for water quality found in Appendix 10.

Comment 1-12: This guideline is contained within all 3 regions in the preferred alternative (Alternative 5) of the Final EIS.

Comment 1-13: BLM's policy is to aggressively control the invasion of weed populations. We will continue to fight weeds as aggressively as personnel and funding allow.

Comment 1-14: See response to comment 1-6.

Comment 1-15: See response to comment 1-9.

Comment 1-16: See response to comment 1-12.

Comment 1-17: Guideline 14 has been eliminated from the preferred alternative (Alternative 5) in the Final EIS. It has been replaced by Guideline 16 which, for the reasons given in Section 5.4.1 and comment responses 1-9, 4-4, and 11-1, we believe is necessary to manage for rangeland health.

Comment 1-18: The fallback guidelines were approved through previous analysis and action, and are part of the current regulations. They are in effect until new guidelines are approved.

Comment 1-19: These guidelines apply only when grazing is the cause of a problem. For the rapid recovery alternative, the quickest, easiest fix was to remove livestock. The assumption was made that after fencing or other management options were in place, some of the livestock could be better managed and allowed back into an area. We recognize, however,

that some upland areas, particularly those in lower seral stages, may not improve with removal of livestock (see response 4-4 for a more detailed discussion).

Comment 1-20: Overutilization of the range can impair rangeland health. For a complete review of the utilization / residue issue, see the utilization response in section 5.4.1, the utilization discussion in Appendix 20, and the Annotated Bibliography.

Comment 1-21: See response to 1-9.

Comment 1-22: Your conclusion is reflected in our analysis. It is highly unlikely that BLM will receive adequate appropriations from Congress to implement Alternative 4.

Comment 1-23: Comment noted. Chapter 3 has been changed.

Comment 1-24: Comment noted. However this is not included in the analysis because it does not affect the decision.

Comment 1-25: We concur and have made the change you suggest.

Comment 1-26: Since the draft was released, the Field Offices have been working to refine the data. Appendix 21 contains an implementation plan with a complete list of which allotments are known to have problems and which are unknown and will need further review. The analysis was done by Field Office staff using their inventory and monitoring files for each allotment, as well as their personal knowledge of the allotments. As monitoring data is not current for each of the allotments in the state (many are small isolated parcels surrounded by private land), there will be some further inventory necessary. Where management changes have already been made and allotments are already progressing towards meeting the standards, monitoring of the progress will be done, and there will probably not be any immediate changes.

Comment 1-27: While there may be too much litter to meet particular site-specific objectives, such as habitat for giant kangaroo rats, other special status species or particular desired plant communities, it is doubtful that too much litter would ever result in communities that do not meet the standards of rangeland health (other than those related to special status species).

Comment 1-28: Section 4.4.4.1 of Chapter 4 analyzes some of the causes of a "failure to meet soil standards." Among these causes are dominance by exotic annuals, fire, lack of fire, and improper road drainage.

Comment 1-29: We agree with you about the value of private rangelands to the conservation of vernal pools in California. We also recognize the interdependence of private lands and federal grazing allotments and will certainly consider the effects of any actions we take on BLM lands on any private lands that are base property for BLM allotments. Most remaining vernal pools in the EIS area, however, occur in and immediately around the Central Valley, an area where BLM lands do not comprise much of the land base. It is doubtful that implementation of these standards and guidelines will have much economic or ecological impact on vernal pools on private lands.

Comment 1-30: The overgrazing of the sagebrush steppe by domestic livestock in the years prior to the passage of the Taylor Grazing Act in 1934 is well documented. See accounts in

Burcham (1957), in Young et al. (1977), and in Miller et al. (1994). Although Burkhardt (1996) asserts that the plants of the sagebrush steppe co-evolved with large, now extinct, grazing ungulates prior to the end of the Pleistocene, it is very possible that those plants could have lost whatever resistance to grazing they may have once possessed during the last 10,000 to 12,000 years (see Belsky 1992 and Baker 1992). Additionally, although the plant species extant today likely evolved when these now extinct large grazing ungulates were alive, their distribution on the landscape has probably changed markedly since the Pleistocene. During the Pleistocene they may have occupied areas that were little grazed. Miller et al. (1994) point out the drastic changes in vegetation composition that have taken place even since the Pleistocene. The lack of resistance to grazing of one of the dominant presettlement perennial bunchgrasses, bluebunch wheatgrass, is well documented (Mack and Thompson 1982; Anderson 1991). Even if Burkhardt's conclusions are true, and the native bunchgrasses are tolerant of the type of grazing pressure the extinct herbivores placed on them, they are certainly not tolerant of season-long, continuous grazing, a fact that Burkhardt (1996) recognizes.

Comment 1-31: True. Some impacts of recreational use are mentioned in Chapters 3 and 4, and some changes have been made to Chapter 3. This EIS is about grazing standards and guidelines, not recreation. To analyze all of the impacts to riparian areas by recreation would require extensive studies and documentation. Leaving the analysis as is shows our awareness of the problems, but does not seek to address those problems here. (See general response to impacts of other programs and uses in section 5.4.1.)

Comment 1-32: See general response to recreation in section 5.4.1. The research sponsored by the California Department of Tourism documents that millions of tourism-related dollars are expended every year in communities and counties near BLM land. The table on page 72 in Chapter Three lists 1995 expenditures for the nine principal grazing counties in the EIS. Three of those counties have significant public land and grazing. The research documents that tourism is a primary economic factor for local communities in Mono County. Tourism in Lassen County is also a very significant part of the economy. Although much smaller than the other nine counties, the tourism impact in Modoc County is still worth 26 million dollars. By comparison, livestock sales in Modoc County in the same year totaled a little over 11 million dollars.

Comment 1-33: The statement by Kattelmann and Embury (1996) is not meant to imply that the only option for improving riparian areas is complete removal of livestock grazing (though that is one option that has been applied on BLM lands and elsewhere in California and the West). It was cited to show that the capability is great for recovery of riparian vegetation that has been degraded by past grazing practices. As we point out in a new paragraph we have added to Chapter 3, Section 3.4.2, and in our responses to comments 16-30 and 26-5, there